

## TIRANA'S HOUSING UNITS AND PARKING IN 2024

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### Abstract

Open parking spaces in residential areas of Tirana today are more concerned with finding suitable locations than merely accommodating a specific number of vehicles. This study aims to analyse the challenges associated with open parking within residential units and internal streets of the city. The construction of new residential complexes over the past 35 years has introduced changes in their design elements compared to the housing stock from the single-party system, prior to the 1990s. The objective is to identify and evaluate the issues arising from the unplanned allocation of parking spaces within the residual areas of residential units designed 40-50 years ago. Finally, it underscores the impact of these improvised parking solutions on urban living conditions and residential environments. Challenges posed by the lack of planned parking spaces, and their distribution within streets and squares of residential units are identified by employing exploratory, comparative, quantitative, and qualitative methods of analysis. Questionnaires were conducted in the premises of the case study area, in order to get the insight of residents and users.

**Keywords:** Residential housing units, underground parking, open parking, street parking.

### Introduction

Every vehicle user in Tirana experiences in a typical workday significant traffic congestion at nearly every hour, particularly in the city centre or other populated spots throughout the city. Throughout continuous economic and political changes, mobility has undergone substantial changes. This shift is more accurately described as a transformation rather than a simple change. Thirty-four years ago, residents of Tirana predominantly relied on public transportation such as local buses, bicycles, and walking, with taxis used only in exceptional circumstances. The number of taxis in Tirana at that time was almost symbolic.

Following the transition to a different political system, owning a private vehicle became more and more common. Today, Tirana's streets are predominantly occupied by personal vehicles, taxis, public transportation, school vans, and, to a lesser extent, bicycles and motorcycles. The convenience of private cars, together with the lack of more possibilities of transport, has driven their increased usage. However, a more pressing issue than traffic itself is the parking of vehicles: open parking spaces, both free or paid, as well as parking within inner streets. In some parts of the city, particularly in newly developed units, the parking issue has been effectively addressed and no longer causes significant stress for its residents. The adequate conditions and location of parking spaces is as crucial to residents as their living space. Thus, for vehicle owners residing in units constructed before the 2000s, parking is often problematic.

Previously, the major part of residents did not possess personal vehicles, and mobility was primarily facilitated through public transportation. In contemporary Tirana, spaces that were once designated for recreation, greenery, and other communal purposes have been repurposed. During the initial years of the political transition period, in the 2000s, a considerable number of residential buildings were constructed, in addition to several formal and informal extensions to existing constructions, without following appropriate urban planning standards. Additionally, the majority of these residences did not include any internal parking facilities, neither closed or open leading to significant changes in the quality of life for residents and service users.

Since the 2000s, the number of owners of personal vehicles has increased significantly. A considerable portion of green spaces has been replaced by commercial and service areas on ground floors. Consequently, parking spaces are used mostly by their users, in addition to

residents. Considering parking as a crucial factor affecting the daily lives of residents, the following research conducts a morphological analysis of areas designated for parking from 1990 to the present.

The population of Tirana, which was approximately 250,000 thirty-four years ago, is now estimated to be around 1,000,000, accounting for more than one-third of the national population. This dramatic increase has significantly escalated the demand for parking, transforming it into a general source of stress, particularly problematic for residential units constructed before 1990.

Over these thirty-four years, numerous elements have been transformed, including the concept of mobility. Previously, public transport, bicycles, and walking were the primary modes of movement. Today, although these modes still exist, there is a marked preference for personal vehicles, taxis, and lately also scooters. Moreover, the ground floors of buildings, which were predominantly used for residential purposes in the past, have been repurposed for business activities. These businesses not only require parking spaces for their vehicles, clients, and services but also include establishments such as bars, restaurants, and other venues that occupy surrounding spaces with parking. The areas once designated for greenery and residential use, are now public spaces congested with vehicle parking. Consequently, green spaces have been significantly reduced.

Residential units constructed over the past two decades, however, present a better situation. Building blocks have been designed with underground parking facilities, contrasting with the older housing stock. Consequently, contemporary residential units, with their internal streets and available open spaces, face significant challenges due to the proximity and considerable number of vehicle parking, including noise, pollution, safety concerns, and a shortage of parking spaces. Historically, the internal streets of residential complexes built before 1990 were primarily traversed by service vehicles. Occasional use was made by fire trucks, ambulances, fuel supply vehicles in winter, taxis during weddings or similar events, and bicycles, as private car ownership was not allowed for the large population.

In contrast, contemporary times face private cars reaching almost the very entrances of collective residences, with very few families lacking private vehicles. Most families own at least one vehicle, and many possess multiple ones, depending on economic conditions and workplace proximity. While public transport disseminates passengers at designated stations along its route and continues onward, and taxis operate similarly, the use of private vehicles—despite their convenience in providing direct travel to destinations—necessitates the allocation of parking spaces. This convenience incurs additional costs and demands space for vehicles to remain stationary. Typically, the tendency is to park on the sides of roads, secondary streets, or within the internal spaces of residential units.

This practice exacerbates issues such as stress, pollution, dust, and noise, and it diminishes the availability of green spaces. These green spaces are essential not only as recreational areas but also as protective "green walls" for collective residences. For the first time in 2015, the Municipality of Tirana undertook initial interventions to create collective parking spaces, a part of which were offered to residents for free and the rest with payment.

Despite these measures, residential complexes in Tirana and their inhabitants face a chaotic situation regarding vehicle parking and the associated challenges.

#### **Materials and methods**

The research presents issues related to parking in residential units constructed prior to the shift to a democratic system, using data from collected questionnaires. The questionnaires have been conducted between February and April 2024, involving 245 randomly selected residents and passers-by in an approximately 2-hectare residential complex. This area is located near the center of Tirana and is bordered by two major roads, Gjergj Fishta Boulevard and Myslym Shyri Street.

The questionnaire consists of 22 topics, with the first five addressing basic information and the remaining 17 focused on the elements that should be present in the spaces between residential buildings. The data from the questionnaires were processed using IBM SPSS Statistics Version 22 and Microsoft Excel.

By analyzing the transformation of the residential unit through different phases, the main parking issues and elements have been identified through graphical representations. Following data processing, comparative, quantitative, and qualitative methods were implemented. Additionally, a typical residential unit was analyzed as a case study and illustrated with graphical drawings, highlighting the main parking issues and elements.

### Research

In the first part of the research, the residential unit is presented graphically in 3D, based on plans obtained from AQTN. The phases that the residential unit has undergone are depicted: its initial project design, its implementation, its condition after 1990 and its current state. As a case study, the multifamily residential unit known as "Godinat e NËpunësve" (Employees' Buildings), designed in 1942 in Tirana, has been selected. The presented volumes are based on projects preserved in the AQTN archives.

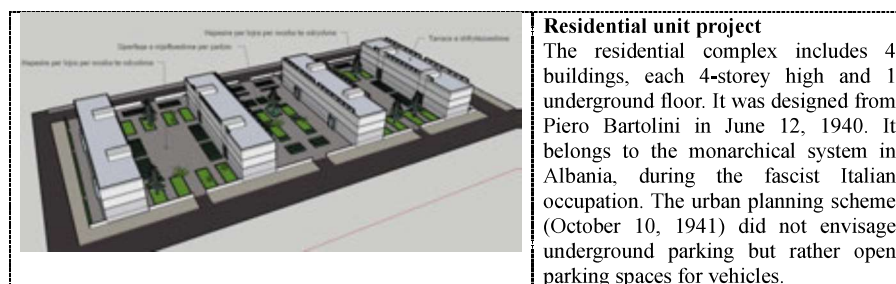


Figure 1. 3D view of the residential unit as designed in the original project. Source: author drawings based on plans from AQTN, Tirana.

The space between the buildings was accessible by vehicle directly from the main road, with vehicles being parked in the external area. The basements of the buildings functioned as storage service areas.

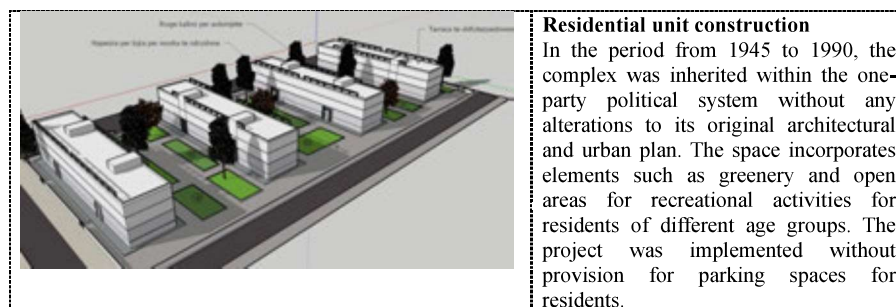


Figure 2. 3D view of the residential unit after construction. Source: author drawings based on plans from AQTN, Tirana.

After World War II, these residences were finally utilized. At this time, after the 1960s, citizens were not permitted to own private vehicles. The internal spaces featured greenery and recreational areas, including sports corners for various age groups.

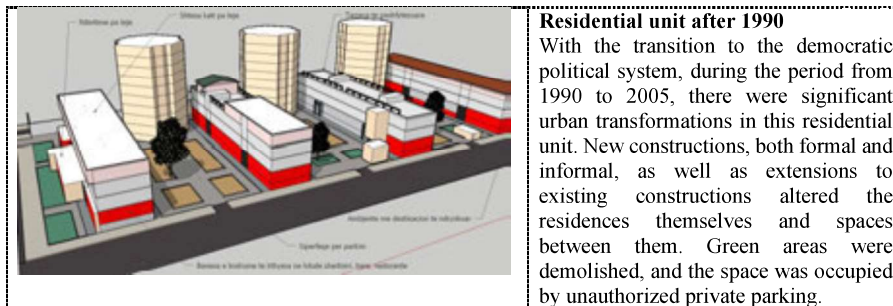


Figure 3. 3D view of the residential unit after 1990. Source: author drawings based on plans from AQTN, Tirana.

With the political system transition in 1990, previous open space between buildings was used for the construction of first multi-story buildings by private entities with building permits. These buildings included one underground parking level, but only for a small number of their residents. The remaining residents parked in the external area. Simultaneously, existing buildings experienced unauthorized extensions, as notable in the 3D view. Consequently, the density increased, the available space diminished, and the number of vehicles in the area grew.

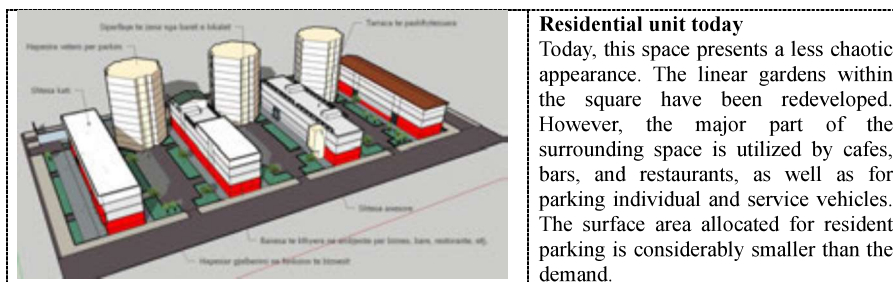


Figure 4. 3D image of the residential unit in the existing situation. Source: author drawings based on plans from AQTN, Tirana.

The 3D views clearly illustrate the transformation undergone by this residential unit. This situation is similar throughout the entire city of Tirana in the residential units inherited from the previous system. Drastic changes were also observed in green areas, external parking spaces, internal roads, sidewalks, lighting, and safety measures. Furthermore, the ground floors of residences have altered their purpose, with nearly 90% of the residential stock in ground floors inherited from before the 1990s being repurposed.

The second part of the research presents the results of the questionnaires conducted in the field.

| Name, Surname |           | Frequency | Percent |
|---------------|-----------|-----------|---------|
| Valid         | passer-by | 34        | 13.9    |

|  |          |     |      |
|--|----------|-----|------|
|  | resident | 211 | 86.1 |
|  | Total    | 245 | 100  |

Figure 5. Table of number of respondents to questionnaires

A total of 245 individuals were surveyed, of which 14% were passers-by who frequented the area for various reasons, such as meeting friends in the recreational spaces of this complex or visiting relatives. Others used the area for shopping or as a daily transit route to work or school. The remaining 86% of respondents were residents of different ages (Figure 5).

To the question, "Do you own a vehicle?" 100% of respondents provided answers (Figure 6). The question referred to whether they had a private car in their household, not necessarily an individual one. Of the respondents, 62.4% owned private vehicles, primarily employed or self-employed individuals, some of whom both work and live in this area. The remaining 37.6% did not own private cars, predominantly students and the unemployed.

| Do you own a vehicle? |       |           |         |
|-----------------------|-------|-----------|---------|
|                       |       | Frequency | Percent |
| Valid                 | Yes   | 153       | 62.4    |
|                       | No    | 92        | 37.6    |
|                       | Total | 245       | 100     |

Figure 6. Results from Question nr. 6: Do you own a vehicle?

In response to Question 7, "Where do you park the vehicle?" 155 out of 245 respondents provided answers (Figure 7). Among those who answered, 26.5% park their cars in private parking spaces. Collective parking areas are used by 30.3% of respondents, indicating that they utilize above-ground and underground parking in new constructions, which are mostly paid parking spaces. The majority, 43.2%, park in public spaces such as streets and squares. The spaces between residential buildings are filled with parked cars, making them unusable for children or the elderly, and leading to noise, pollution, chaos, and safety issues. Additionally, there is the problem of driver stress due to the time spent searching for parking, as well as the potential for fines from improper parking.



Figure 7. Results from Question nr. 7: Where do you park the vehicle?

Similar questionnaires have been conducted five years ago in other residential areas of Tirana. When comparing the most recent results with the previous ones, it becomes evident that the percentage of parking in streets and interior spaces of residential units has increased. This indicates that the problem is worsening. Meanwhile, the number of vehicles circulating in Tirana continues to rise, as does the number of new constructions. This leads to a reduction in existing spaces, exacerbating the issue of parking in streets, squares, and public areas. For most questions, respondents were allowed to provide 1-3 alternatives. The results present the first alternative.

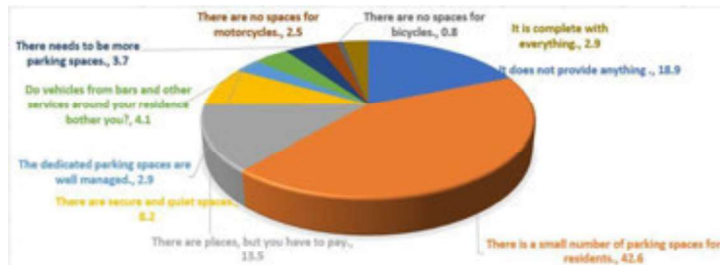


Figure 8. Results from Question nr. 11: Where do you park the vehicle?

For Question No. 11, "Does the space around the building, outside or underground, provide parking for you as a resident?" 244 out of 245 respondents answered. This question includes 10 response options, as following:

0. It does not provide anything.
1. There is a small number of parking spaces for residents.
2. There are places, but you have to pay.
3. There are secure and quiet spaces.
4. The dedicated parking spaces are well managed.
5. Do vehicles from bars and other services around your residence bother you?
6. There needs to be more parking spaces.
7. There are no spaces for motorcycles.
8. There are no spaces for bicycles.
9. There are no spaces for people with disabilities.
10. It is complete with everything.

The processing of the responses to Question No. 11 reveals that 18.9% of the respondents indicated that the space around the building does not provide any parking facilities for them. This implies that the area lacks essential elements necessary for accommodating parking needs. A significant 42.6% of the respondents selected the first option, indicating that residents with private vehicles encounter difficulties in finding parking spaces. This issue impacts their daily lives, reduces their quality of life, increases stress, consumes their time, and affects their psychological well-being. It suggests that local authorities need to take measures to ensure a greater number of parking spaces for residents. Resident parking typically falls under the category of free parking.

In contrast, 13.5% of the respondents chose the second option related to paid parking. Paid parking in Tirana is managed by the institution Tirana Parking and is known as "Parkim me SMS" (Parking by SMS). The city of Tirana is divided into four parking administration zones. Residents are guaranteed free parking spaces within their residential zone, except in designated main road areas subject to a fee system. These paid parking areas are marked by white lines and signs. Short-term parking spaces intended for business purposes are classified as Reserved Parking, which businesses obtain through annual payments. The number of these spaces is usually limited compared to demand, causing residents' parking spots to be occupied by business clients.

With the political system change after 1990, existing collective housing underwent functional transformations. Many of the ground-floor and first-floor apartments were converted into various types of businesses. Even today, they continuously change their purpose. Former service areas, equipped with permits from local authorities, are being turned into cafes or bars. This consequently affects the residents' lives. Apart from the noise generated by these establishments, concerns also arise from the vehicles and service cars. Regarding the fifth question, 4.1% of the respondents express their concern regarding the parking of vehicles from

the businesses on the ground floors. In addition to the problems of noise pollution, this also leads to a lack of security for the residents of units. Although the questionnaire was conducted in a specific complex, the same symptoms can be viewed in the entire city of Tirana. Another important issue is the lack of designated parking spaces for bicycles or motorcycles. Additionally, inadequate conditions for the mobility of persons with disabilities has been mentioned through the questionnaires. 15% of the respondents have chosen as their second and third alternatives of issues to the question that elements for persons with disabilities are lacking in the spaces around their homes. This is especially true for housing units built before the 1990s, which do not provide any mobility conditions. There are sporadic interventions on the sidewalks along the main roads, while within the same housing units, there are no elevators or ramps. Question 12, "Which common space do you use the most?" was answered by 243 out of 245 respondents (Figure 9).

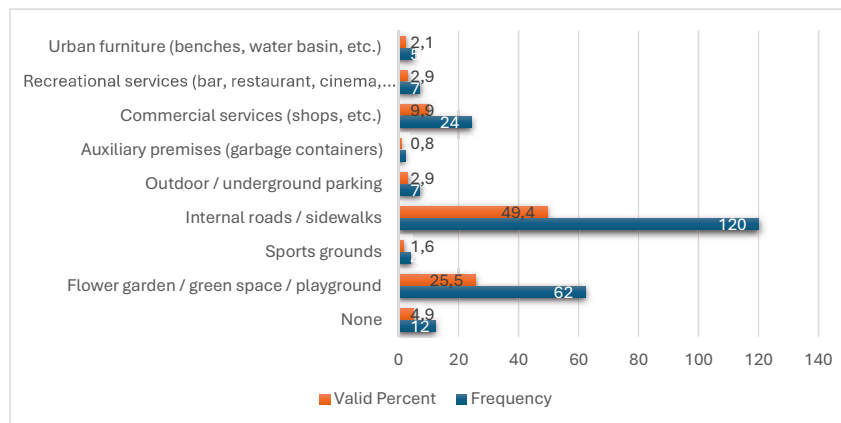


Figure 9. Results from Question nr. 12: Which common space(s) do you use the most?

Respondents could choose up to three alternatives for the question. The table (Figure 9) shows the results of their first choice. The options of question 12 were as following:

0. None
1. Flower gardens / Green space / Playground
2. Sports grounds
3. Internal roads / sidewalks
4. Outdoor / Underground parking
5. Auxiliary premises (f.e. garbage containers)
6. Commercial services (f.e. shops)
7. Recreational services (f.e. bars, restaurants, cinema etc.)
8. Urban Furniture (f.e. benches, water basins etc.)
9. Other

The analysis of the questionnaire outcomes distinctly reveals that spaces between buildings, in the majority of instances, lack essential elements, including green areas, urban furnishings, secure pathways, sidewalks, adequate open parking facilities for residents, service amenities, recreational zones catering to various age groups, lighting, security measures, among others. Among the surveyed individuals, approximately 49.4% noted that the space surrounding their residences merely consists of access roads facilitating entry and exit. Notably, the designated parking spaces are limited, with a mere 3% utilizing the parking provisions allocated for them. Specifically for the case study illustrated graphically in Figure 4, the space between the

residential buildings predominantly consists of decorative greenery and parking spaces. Nonetheless, these spaces are predominantly used by local businesses. It's noteworthy that the design and allocation of these spaces before 1990 were primarily intended to cater to the needs of the residents. Presently, however, the parking provisions available to them fall short in adequacy. This insufficiency is further compounded by the observation that a significant number of families, particularly those with an average age surpassing 60 years, do not possess private vehicles. Consequently, the quality of life within these residences has been compromised, attributed to their proximity to the urban core and primary thoroughfares. While these circumstances may contribute to a heightened sense of safety, they do not necessarily ensure comfort. Significant concerns mentioned by residents include noise pollution, dust, vehicular emissions, and any potential encroachment by new developments within the immediate courtyard surroundings.

Question 15. "How much do the noises of cars, unpleasant smells, dust from the premises, from the gases of vehicles or new constructions (if any) in the surrounding yard bother you in your apartment?" elicited responses from 245 respondents. (Figure 10)

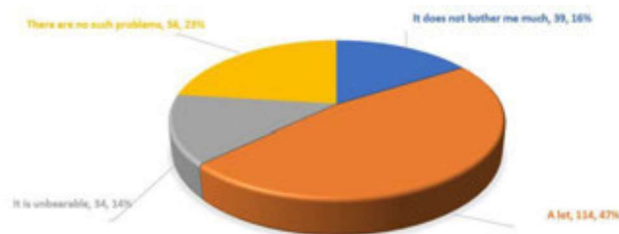


Figure 10. Results from Question nr. 15: How much do the noises of cars, unpleasant smells, dust from the premises, from the gases of vehicles or new constructions (if any) in the surrounding yard bother you in your apartment?

The graphic depicts from the collected data, and indicates that out of the total 245 respondents, 114 individuals (constituting 47% of the total) have chosen the option "A lot." When combined with the 14% who have expressed "It's unbearable", this collective represents more than half of the surveyed population. Notably, those respondents who reported being undisturbed or lacking concerns predominantly reside in upper-floor apartments or newly constructed dwellings. The utilization of new and high-quality materials for window frames and façade walls suggests a meticulous consideration of architectural elements. However, this analysis underscores potential inadequacies in the organization of housing unit forms. Internal streets are observed to be in close proximity to residential structures, and the presence of tall greenery, which could serve as a barrier against noise and dust pollution, is notably lacking. Furthermore, the placement of vehicle parking facilities appears to be inadequate. In addition to these factors, the material composition of window frames, walls, and other selected interior elements plays a crucial role in shaping residents' experiences and perceptions.

### Conclusions

One of the most insightful questions of the questionnaire is the following: "What fundamental issues (in your opinion) exist in the spaces between residential buildings (courtyards)?" For this question, respondents freely expressed their views on the problems associated with the spaces surrounding their residences. The most frequently cited issues were:

"Proximity to the road and vehicular traffic"

"Air pollution from vehicles passing very close"

"Close distance between buildings and lack of adequate infrastructure for insulation"

"Lack of lighting and security"

"High-speed vehicle movement"

"Narrow streets, heavy traffic"

"Noise from frequently visited bars"

"Previously free spaces are now overcrowded"

"Common spaces have been encroached upon and transformed into gardens in front of ground-floor apartments"

"It has been transformed; spaces once filled with children playing have been converted into parking areas"

"Residences have been constructed, roads expanded, and commercial units established"

"Many free spaces have been turned into parking or construction sites"

"Our former spaces have been taken over; if organized well, the parking problem can be resolved"

Through the highlight of issues resulting from the collation of questionnaire data and the conducted qualitative analysis, it becomes evident that security within pre-1990s existing residential units has undergone a noticeable decline. Concurrently, an escalation in noise levels and pollution has been increased. Interventions in existing spaces between buildings, with the ongoing intensive construction of new tower-type residential buildings, has significantly augmented the number of vehicles circulating in the area. The predicted necessary area and number for parking spaces has been calculated in accordance to the number of residents only, not including all users of other services. Moreover, there is a conspicuous absence of varied greenery, particularly the presence of tall trees through sidewalks.

Shifting vehicular traffic at a safe distance from entrances of residential buildings is critical. Residents often perceive the large number of commercial activities, like bars and cafes, taking the place of green spaces and even small gardens, as pressing issues necessitating resolution. Local authorities grant permits for such activities.

According to respondents, in order to spend leisure time in the proximity of their residence, individuals frequent commercial venues and service areas due to a perceived lack of alternatives, as these spaces notably affect the residential environment. Residents note that elements like greenery, urban furniture, service amenities, and designated play areas positively impact psychological well-being.

Adherence to planning and design standards is crucial for ensuring adequate natural light and maintaining apartment privacy, which are currently compromised. The common spaces between buildings serve primarily as transition zones rather than recreational areas, hindering efforts to foster community engagement and enhance daily living experiences.

The construction of new multi-story residential buildings within or adjacent to existing buildings built before the 1990s has exacerbated issues of parking such as shortages, noise pollution, and environmental concerns. The increasing number of vehicles will continue to aggravate these issues, underscoring thus the urgent need for calculated parking provisions, not only to the selected case study but also similar contexts.

Throughout Tirana, the conversion of ground-floor residential spaces into commercial and service establishments has become a common trend in residential buildings dating from before the 1990s. Consequently, residents find themselves using only communal areas within the building, such as halls, stairs or others, while the surrounding spaces are managed by local authorities as public spaces.

Residents bring the issue of the absence of dedicated services surrounding their residences beyond basic infrastructure like roads and sidewalks. Consequently, they feel increasingly disconnected from the spaces surrounding their homes.

These findings underscore the urgent need for reevaluation and potential requalification of the surrounding spaces, particularly to address deficiencies in greenery and recreational amenities.

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